

**UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF INDIANA  
SOUTH BEND DIVISION**

C.W., et al.	)	
	)	
Plaintiffs,	)	
v.	)	
	)	NO. 3:10 CV 87
TEXTRON, INC.,	)	
	)	
Defendant.	)	
	)	

**OPINION AND MEMORANDUM**

Defendant Textron, Inc., asks that I grant it summary judgment on the Plaintiffs' claims of negligence regarding injuries their children allegedly suffered when a chemical from Textron's plant entered the Plaintiffs' water supply. (DE 239.) Because I previously excluded the Plaintiffs' causation experts (DE 234), Textron argues that this case cannot proceed. Having reviewed the parties' extensive briefing on this issue, I agree with Textron that the Plaintiffs cannot meet their burden on proving causation and therefore I will **GRANT** Textron's motion (DE 239).<sup>1</sup>

**BACKGROUND**

The facts alleged in this case and procedural history have been more fully set forth in my prior order on the various motions in limine (DE 234) and in the parties' briefing on this motion (DE 241, 242, 245) so I will put forth only those facts necessary to

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<sup>1</sup> Because I grant Textron's motion for summary judgment, I find that it is unnecessary to rule on the pending motions in limine.

decide the summary judgment motion here. Plaintiffs, C.W. and E.W., are the minor children of Adele and Jason Wood. They allege that the water they used in their Rochester, Indiana home was contaminated with a chemical called vinyl chloride, which seeped into the groundwater from a facility owned by Textron.

C.W. was adopted and brought to the Wood home on May 11, 2007, when he was 11 weeks old. E.W. was adopted and brought to the home on April 25, 2008, when she was 11 days old. The Woods allege that the children were exposed to the vinyl chloride, a known human carcinogen, by drinking the water, through contact with their skin, and through inhaling water vapors when they were bathed. The Woods brought both of the children to their Rochester home before they were aware of the contamination.

In November 2008, Textron found that the Woods' water was contaminated with vinyl chloride. The various testing Textron performed during the latter half of 2008 showed that the concentration of vinyl chloride at the Woods' home was between 5.00 and 8.40 parts per billion. On November 5, 2008, Textron notified the Woods of the contamination. The Woods removed their children from the home on that day, and they never returned. In September 2009, Textron found that the concentration of vinyl chloride at the Woods home was between 8.60 and 9.00 parts per billion.

The Woods have sued Textron for negligence, negligence per se, negligent infliction of emotional distress, and claim that the actions underlying the negligence claims above were willful and wanton. They claim that vinyl chloride has caused a

number of illnesses in their children and substantially increases their risk of adverse health effects throughout their lives. The Woods allege that while the children lived in the Rochester home, they suffered from gastrointestinal issues, including spitting up, projectile vomiting, and bloody stools; that E.W. had skin problems in the form of an itchy rash; and that both children have suffered neurological problems. They also contend that the children are now at an increased risk for cancer.

In support of these allegations, they proffered the expert testimony of a number of experts as to causation – Dr. Jill Ryer-Powder, a toxicologist; Dr. Vera Byers, an immunologist; and Dr. Jeffrey Dahlgren, a physician – all of whom I excluded on March 17, 2014. (DE 234.) In essence, I found that each expert failed to provide adequate support for his or her contention that vinyl chloride in the dose and duration of exposure allegedly suffered by the Woods’ children is capable of causing their various ailments. More specifically, these experts all relied upon various studies whose data could not be extrapolated to the Woods for various reasons. Most damning was the fact that the studies relied upon by the Woods’ experts all involved concentrations of vinyl chloride that greatly exceeded – in some cases thousands of times more – the exposure in this case. What’s more, some of the studies relied upon by the experts involved substances bearing no relation to vinyl chloride, and the experts failed to provide any real basis for extrapolating those results to this matter other than their say-so. (See DE 234 at 34.)

Textron asks me to grant summary judgment in its favor because without expert

testimony on causation, the Woods cannot possibly prevail on their claims of negligence. The Woods, however, argue that two of their remaining experts – Dr. Jerrod Feldman, a pediatrician who has treated the children since May 2007, and Dr. Claude Ruffalo, a psychologist who evaluated the children’s neurological functioning – can provide testimony that establishes causation, although neither expert was originally proffered as a causation expert. (*See* DE 240-2 at 2; DE 240-3 at 3, Feldman Dep. Excerpts at 27:18-28:19, 30:7-23; 31:2-4; 48:18-49:4; DE 161 at 1-2.) Dr. Feldman is expected to testify that his differential diagnosis of the children rules out all causes of the children’s various gastrointestinal and dermal issues other than vinyl chloride, while Dr. Ruffalo is expected to testify that the vinyl chloride exposure caused various neurological deficits in the children. The Woods also point to the testimony of Textron’s expert Dr. Thomas McHugh as establishing that vinyl chloride is known to cause cancer, and therefore their children are at an increased risk for developing cancer later on.

The primary issue before me then is whether the Woods can marshal enough causation evidence to allow this case to go to a jury. The only causation evidence cited by the Woods that has not been excluded is the testimony of Drs. Feldman, Ruffalo, and McHugh, so I will address each expert’s expected testimony in turn after a brief discussion of the applicable law.

## **DISCUSSION**

Summary judgment is proper “if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.”

Fed. R. Civ. P. 56(a). A genuine dispute about a material fact exists only “if the evidence is such that a reasonable jury could return a verdict for the non-moving party.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). In making this determination, I must construe all facts and draw all reasonable inferences from the record in the light most favorable to the nonmoving party. *Id.* at 255. Failure to prove an essential element of a plaintiff’s case necessitates summary judgment in favor of the defendant because “[i]n such a situation, there can be ‘no genuine issue as to any material fact,’ since a complete failure of proof concerning an essential element of the nonmoving party’s case necessarily renders all other facts immaterial.” *Celotex Corp. v. Catrett*, 477 U.S. 317, 322-23 (1986).

To prevail on its various claims of negligence against Textron, the Woods must prove that Textron was negligent and that its negligence caused their children’s harms. *Myers v. Ill. Cent. RR Co.*, 629 F.3d 639, 642 (7th Cir. 2010). In other words, the Woods must prove that vinyl chloride caused the children’s various medical and neurological issues. And in cases like this, “when there is no obvious origin to an injury and it has multiple potential etiologies, expert testimony is necessary to establish causation.” *Id.* at 543 (quotation marks omitted); *see also Korte v. Exxonmobil Coal USA, Inc.*, 164 Fed.Appx. 553, 558, 2006 WL 41284, at \*\*4 (7th Cir. 2006) (granting summary judgment to defendants where plaintiff had no expert testimony on causation in toxic tort case).

Under Indiana law, which governs in this diversity case, proving causation in a toxic tort case requires a two-step process whereby the plaintiff must first prove general

causation, and then prove specific (or individual) causation. *7-Eleven, Inc. v. Bowens*, 857 N.E.2d 382, 389 (Ind.Ct.App. 2006)(requiring toxic tort plaintiffs to “establish both generic and individual causation” and finding plaintiffs who did not first prove general liability would not be entitled to recover). This bifurcated method of proving causation in toxic tort cases is not unique to Indiana. See e.g. *Knight v. Kirby Inland Marine, Inc.*, 482 F.3d 347, 351 (5<sup>th</sup> Cir. 2007)(“Evidence concerning specific causation in toxic tort cases is admissible only as a follow-up to admissible general-causation evidence.”); *Avila v. Willits Environmental Remediation Trust*, 633 F.3d 828, 836 (9<sup>th</sup> Cir. 2011) (toxic tort plaintiffs must prove both general and specific causation); *Junk v. Terminex Intern. Co.*, 628 F.3d 439, 450 (8<sup>th</sup> Cir. 2010) (same); *Higgins v. Koch Development Corp.*, No. 3:11cv81, 2014 WL 467687, at \*\*3 (S.D.Ind. Feb. 5, 2014) (same).

In Indiana, general causation establishes “whether the substance at issue had the capacity to cause the harm alleged,” whereas specific causation establishes “whether a particular individual suffers from a particular ailment as a result of exposure to a substance.” *7-Eleven*, 857 N.E.2d at 389 (quotation marks and citation omitted); see also *Baker v. Chevron USA, Inc.*, 680 F. Supp.2d 865, 874 (S.D. Ohio 2010); *Aurand v. Norfolk Southern Railway Co.*, 802 F.Supp.2d 950, 953 (N.D. Ind. 2011). “Scientific knowledge of the harmful level of exposure to a chemical, plus knowledge that the plaintiff was exposed to such quantities, are minimal facts necessary to sustain the plaintiffs’ burden in a toxic tort case.” *Allen v. Pa. Eng’g Corp.*, 102 F.3d 194, 199 (5<sup>th</sup> Cir. 1996). And although Indiana courts have not yet addressed what type of evidence a plaintiff must

put forward to prove general causation, courts routinely require plaintiffs to present evidence that the dosage of the substance the plaintiffs were exposed to is capable of causing the harms suffered in order to establish general causation. *See e.g. In re Hanford Nuc. Reservation Litigation*, Nuclear Reg. Rep. P 20, 621, 292 F.3d 1124, 1134 (9th Cir. 2002) (finding “plaintiffs would have to show exposure to more than *de minimus* emissions to establish generic causation”); *Mallozzi v. Ecosmart Tech. Inc.*, No. 11-CV-2884, 2013 WL 2415677, at \*4 (E.D.N.Y. May 31, 2013) (expert must show “levels of the toxin comparable to those received by the plaintiff can cause the specific types of injuries he alleges” to establish general causation (*quoting Mancuso v. Consol. Edison Co. of NY, Inc.*, 967 F.Supp. 1437, 1445 (S.D.N.Y. 1997))); *Pratt v. Landings at Barksdale*, No. 09-1734, 2013 WL 5376021, at \*3 (W.D.La. Sept. 24, 2013) (finding plaintiff must establish “the exposure was a dose sufficient to cause health effects” to prove general causation); *Arias v. Dynacorp*, 928 F.Supp.2d 10, 22-24 (D.D.C. 2013) (excluding expert opinion for failing to support general causation where expert presented no evidence confirming “that the toxin can cause the health effects experienced by the plaintiff at the dosage the plaintiff was exposed to”)(quotation marks omitted); *but see Gresser v. Dow Chemical Co.*, 989 N.E.2d 339, 347 (Ind.Ct.App. 2013) (stating “specific causation in toxic tort cases is ‘usually’ supported by evidence of . . . the amount of exposure necessary to cause the disease,” but the court did not address general causation). This is because “the dose makes the poison” – *i.e.* a substance cannot be “capable” of causing the harms alleged if

it's not present in sufficient quantities.<sup>2</sup> See Reference Manual on Scientific Evidence, 3d Ed., p. 636 (2011) (“‘the dose makes the poison;’ this implies that all chemical agents are intrinsically hazardous – whether they cause harm is only a question of dose. Even water, if consumed in large quantities, can be toxic.”).

In other words, the Woods must first prove that the level of vinyl chloride their children were allegedly exposed to could cause the children's medical and neurological issues (general causation), and then they must prove that this dose of vinyl chloride did, in fact, cause these issues (specific causation). The Woods do not dispute this two-step paradigm, but instead argue that the differential diagnosis performed by their children's treating physician, Dr. Feldman (and, in fact, those performed by their excluded experts Drs. Dahlgren and Byers<sup>3</sup>), rules out all other causes of the children's ailments, leading to an inference that vinyl chloride is the cause. Differential diagnosis

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<sup>2</sup> This is not to say that dose isn't also relevant to specific causation. See *e.g.* *Gresser*, 989 N.E.2d at 347. But because I find that the Woods have not proven general causation, I need not evaluate whether they have presented adequate evidence of specific causation.

<sup>3</sup> The Woods argue that I “erred in not considering differential diagnosis as a means of establishing the scientific reliability of [Drs. Dahlgren and Byers'] methodology, which is a dispositive factor for admissibility, and instead only examined the presence of published literature, which is a non-dispositive factor” and that to the extent those opinions were not excluded, “the differential diagnosis facts and opinions [are] genuinely disputed, thereby precluding the entry of summary judgment.” (DE 242 at 1-2.) It is unclear whether the Woods are asking me to reconsider that ruling, but in any event, the Woods' position misapprehends the controlling law. Differential diagnosis is admissible only insofar as it supports specific causation, which is secondary to general causation, as discussed below. So even if this evidence were admissible, it would go only to specific causation, which is unhelpful to the Woods since I have found (as discussed in the rest of this opinion) that they have failed to first establish general causation. And *Turner v. Iowa Fire Equip Co.*, 229 F.3d 1202 (8th Cir. 2000) doesn't hold to the contrary; in fact, the court excluded the expert's differential diagnosis as unreliable and found that differential diagnosis may satisfy *Daubert* where the toxin at issue is not well-studied. That is simply not the case here.



requires a physician to systematically “compare[] and contrast[] clinical findings from a patient’s medical history to determine which of two or more diseases with similar symptoms is the one from which the patient is suffering.” *Myers*, 629 F.3d at 644 (quotation marks and citation omitted). Essentially, the physician arrives at a diagnosis by a process of elimination where conditions are systematically ruled out until only a final condition remains. “[A] fundamental assumption underlying this method is that the final, suspected ‘cause’ remaining after this process of elimination must actually be capable of causing the injury.” *Bickel v. Pfizer, Inc.*, 431 F.Supp.2d 918, 923 (N.D. Ind. 2006), *quoting Lennon v. Norfolk & Western Railway Co.*, 123 F.Supp.2d 1143, 1153-54 (N.D. Ind. 2000). So while a proper differential diagnosis can, in some circumstances, be used to support specific causation, it cannot be used to support general causation. *Id.* “Indeed, differential diagnosis assumes that general causation has been proven for the list of possible causes it eliminates.” *Id.* And “[d]ifferential diagnosis may be utilized by a clinician to determine what recognized disease or symptom the patient has, but it is incapable of determining whether exposure to a substance . . . caused disease in the legal sense.” *Id.* at 924.

This is where the Woods’ case fails — they have simply not provided any evidence to support general causation. And because the Woods lack any evidence of general causation, this differential diagnosis doesn’t help them because a jury can’t weigh evidence of specific causation until the Woods have first proven general causation. *See 7-Eleven*, 857 N.E.2d at 389; *Knight*, 482 F.3d at 351; *Higgins*, 2014 WL

467687 at \*\*3. Moreover, the Woods are not entitled to inferences supported only by speculation and conjecture. *Argyropoulos v. City of Alton*, 539 F3d 724, 732 (7th Cir. 2008). What this all adds up to is that even if Dr. Feldman properly ruled *out* all other causes of the children's medical and neurological issues, the Woods still have failed to present any evidence to rule *in* vinyl chloride at these levels — at most, 9 parts per billion — as the cause that would support a proper inference. Without this link, this case simply cannot go to a jury.

The Woods argue, however, that Dr. Ruffalo, a clinical psychologist who evaluated the children's neurological functioning, can provide that missing link. Here, too, however, the Woods' argument fails. Despite the Woods' previous representation that Dr. Ruffalo would not be testifying about general causation (DE 161 at 1-2), the Woods now argue that Dr. Ruffalo can establish that vinyl chloride caused the children's alleged neuropsychological injuries. (DE 242 at 12.) Dr. Ruffalo is expected to testify that the children's "mental and behavioral impairments and disabilities were caused by neurotoxic exposure during critical periods of neuropsychological development." (*Id.*) But at best, this testimony would go to specific causation, not general causation. And moreover, Dr. Ruffalo supplies no basis for a jury to find that vinyl chloride was the culprit. In fact, the Woods admit that "Dr. Ruffalo does not offer an opinion on the 'toxicological link' because he is not a toxicologist." (*Id.*) In other words, Dr. Ruffalo cannot establish that vinyl chloride at these levels is generally capable of causing the children's injuries, and thus cannot establish general causation.

As I stated above, the Woods must prove that vinyl chloride at the dose the children were allegedly exposed to can lead to their medical and neurological issues. The Woods claim that Dr. Ruffalo can establish that fact regarding the children's neurological symptoms. (DE 242 at 12.) Yet Dr. Ruffalo testified that he was relying on Dr. Dahlgren that the level of exposure was medically significant and that this really was Dr. Dahlgren's area of testimony and expertise. (DE 240-1 at 3, Ruffalo Dep. Excerpts 170:20-171:18). In fact, when asked where he got his assumption that "the children were exposed to vinyl chloride at a dose that would affect them crossing the blood brain barrier and damaging cells," he admitted that he was relying on Dr. Dahlgren for that fact. (*Id.* at 170:1-8.) Now that Dr. Dahlgren's toxicity opinion has been excluded, Dr. Ruffalo cannot rely on it. And without any other bases for assuming that vinyl chloride could cause these injuries at the dose and duration of exposure in this matter (*i.e.* general causation), Dr. Ruffalo's testimony cannot carry any weight.

But the Woods claim that Dr. Ruffalo has independent bases for his opinion that vinyl chloride can cause the alleged neurological injuries. The Woods argue that Dr. Ruffalo's experience "evaluating cases over many years of solvent exposure, certainly going back to the late 70's" is an independent basis for establishing that vinyl chloride can cause the children's issues. (DE 242 at 13.) Yet none of those cases dealt with vinyl chloride. (DE 246-2 at 3, Ruffalo Dep. Excerpts at 164:10-165:12.) At bottom, Dr. Ruffalo does not know the concentration of vinyl chloride the children were exposed to, or at what concentration vinyl chloride becomes toxic, and he therefore cannot opine as to

whether the dose or duration of exposure in the present matter is capable of causing the neurological deficits he observed. His “other sources” simply can’t fill in the necessary gaps.

The Wood’s attempt to use Dr. Thomas McHugh’s testimony that vinyl chloride is a known carcinogen to establish causation for the children’s alleged increased risk of cancer fails for the same reason. While it is true that Textron’s expert testified that vinyl chloride is generally classified as a known carcinogen, mutagen, and genotoxicant by various agencies and organizations (DE 242 at 11), this testimony does not establish that exposure to vinyl chloride at the level the children were allegedly exposed to actually increases the risk of developing cancer.

Here, even if I assume that the children were exposed to the full amount of vinyl chloride claimed, *i.e.* 9 parts per billion, and even if each expert’s testimony was reliable, there is simply no evidence that exposure to vinyl chloride at this dose is capable of causing their symptoms or increases their risk of developing cancer. In other words, the Woods have failed to marshal any evidence of general causation. As much as I truly sympathize with the Woods for the difficulties they and their children have faced, there simply isn’t enough evidence for a reasonable jury to say that these difficulties were caused by Textron. In this situation, I have no choice but to grant summary judgment in favor of Textron. *Celotex*, 477 U.S. at 322-23; *Korte*, 164 Fed.Appx at \*\*3-4; *Aurand*, 802 F.Supp.2d at 964-65.

## CONCLUSION

For the foregoing reasons, Textron's Motion for Summary Judgment (DE 239) is  
**GRANTED.**

**SO ORDERED.**

**ENTERED:** October 3, 2014

s/Philip P. Simon  
PHILIP P. SIMON, CHIEF JUDGE  
UNITED STATES DISTRICT COURT